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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/579,490

02/08/2007

Ted Deisenroth

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1650

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EXAMINER

QIAN, YUN

ART UNIT

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1793

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,490	<b>Applicant(s)</b> DEISENROTH ET AL.	
	<b>Examiner</b> YUN QIAN	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 24 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

#### ***State of Claims***

Claims 1-13 remain for examination. Claims 1 and 3 are amended and Claims 14 and 15 are new.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

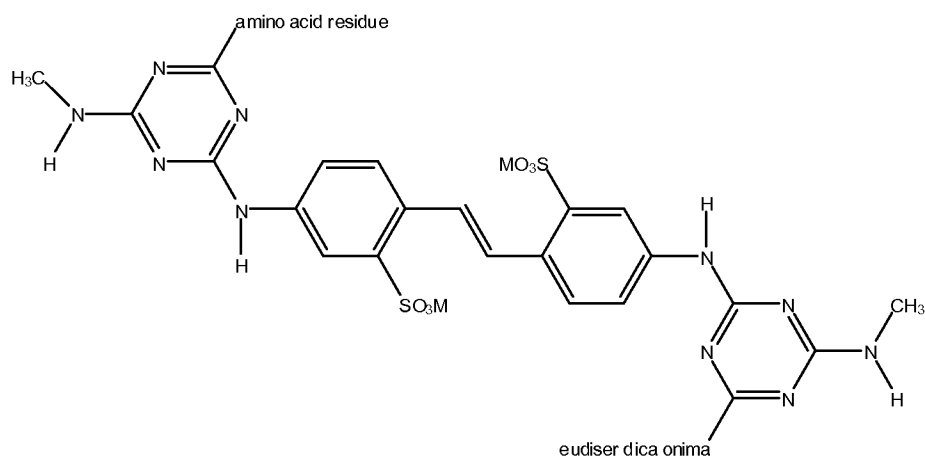
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

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Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-15 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Rohringer et al. (WO 01/11140).

Regarding claim 1, Rohringer et al. discloses a whitening pigment comprising of (a) melamine-formaldehyde and (b) a water-soluble fluorescent whitening agent. The water-soluble fluorescent whitening agent taught by Rohringer (structure of shown below) corresponds to the instant claim of formula (1), wherein  $R_1 = \text{CH}_3$ ,  $R_2 = \text{H}$ ,  $X_1 = \text{amino acid residue}$  (abstract).



Although the wt% of component b taught by Rohringer is from 0.05 to 10% wt (page 3, paragraph 4), the amount of whitening pigments for use in coating composition can be modified by one skilled in the art based on the desired

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whitening effect (page 4, paragraph 9). Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

In addition, it is the position of the Examiner that where the general composition of each content is disclosed in the prior art, discovering the optimum or workable ranges within the context of coating composition would involve only skill in the art, particular in view of the fact that: “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955) (“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.”) (MPEP 2144.05).

Regarding claims 2-3, and 5-7, as discussed above, Rohringer ‘et al. discloses a whitening pigment comprising of the same melamine-formaldehyde product and a water-soluble fluorescent whitening agent as the instantly claimed.

Regarding claim 4, Rohringer et al. teaches a whitening pigment comprising of R<sub>1</sub> as an amide group (-CONH<sub>2</sub>) (Abstract).

Regarding claim 8, Rohringer et al. teaches a process for the preparation of whitening pigment as the instantly claimed (page 6-7, Example 1).

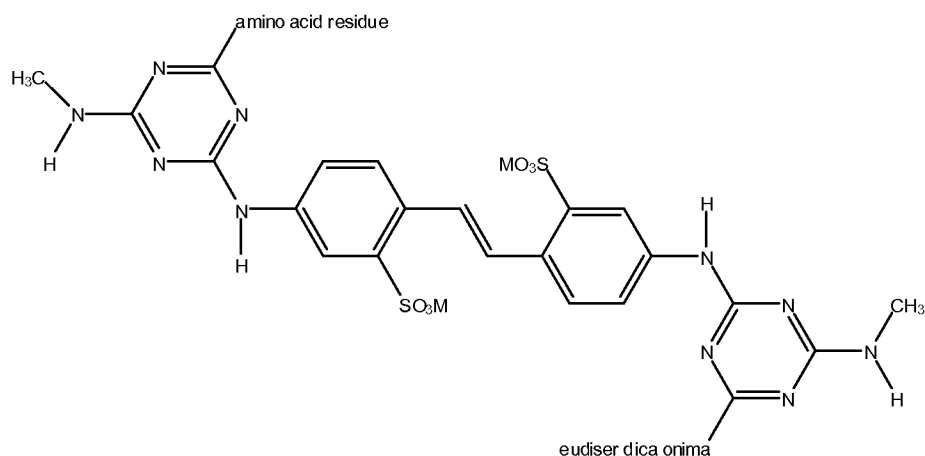
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Regarding claims 9-13, Rohringer et al. teaches a method of using the whitening pigment on paper (page 5, paragraph 5) and the paper coating compositions (page 5, lines 3-10 and claims 5-6 and 8).

Regarding claim 14, Rohringer et. al discloses a use of whitening pigment comprising (a) 75-99% wt of melamine-formaldehyde (page 4, paragraph 6), (b) a water-soluble fluorescent whitening (0.05-10%wt) agent of formula (1), and (c) 0-20% aromatic sulfonamide (page 4, paragraph 6) at pH 3.5-4, 85-90°C.

The component a taught by Rohringer is the same as the instantly claimed.

The water-soluble fluorescent whitening agent taught by Rohringer (structure of shown below) corresponds to the instant claim of formula (1), wherein  $R_1 = \text{CH}_3$ ,  $R_2 = \text{H}$ ,  $X_1 = \text{amino acid residue}$  (abstract).



The weight% of each component is encompassed by the instantly claimed.

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As discussed above, although the reaction taught by Rohringer is carried out at pH of 3.5 to 4, which is outside the claimed pH of 2, it is the position of the Examiner that where the general composition of each content is disclosed in the prior art, discovering the optimum or workable ranges (such as pH, temperature) within the context of coating composition would involve only skill in the art, particular in view of the fact that: “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955) (“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.”) (MPEP 2144.05).

Regarding 15, Rohringer teaches a reaction of melamine-formaldehyde with water-soluble fluorescent whitening agent in the presence of sulfuric acid (mineral acid) and subsequently treated with aq. NaOH as the instantly claimed (page 7, paragraph 2).

### ***Response to Arguments***

Applicant's amendments to the Claim Rejections, filed on October 24, 2008 are acknowledged.

Regarding claims 1-3, 5-7, 9 and 13, applicant's amendments overcome the non-statutory obviousness-type double patenting rejection as set forth in the First Office Action, Section of Double Patenting.

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Applicant's amendments overcome the rejections set forth in the First Office Action, Section of Claim Rejection-35 USC 112.

Applicant's amendments and arguments with respect to claims 1-13 rejected under 35 U.S.C.102 (b) as being anticipated by Rohringer et al. (WO01/11140) have been fully considered, the Examiner respectfully disagrees.

Applicants argue that Rohringer et al. does not teach the reaction of component a (melamine formaldehyde) with component b (whitening agent) to form a compound as in the instant invention. As set forth in the First Office action, not only these two components taught by Rohringer are the same as the instant claim, and the reaction conditions taught by Rohringer are substantially the same (85-90 °C vs. 50-90 °C, pH 3.5 to 4 vs. under acidic condition). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to expect to form the same product under these conditions. The rejection of claims 1-13 as generally set forth in the First Office Action stands.

Regarding new claims 14 and 15, the rejections are set forth above under 35 U.S.C 103(a).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUN QIAN whose telephone number is (571)270-5834. The examiner can normally be reached on Monday-Thursday, 10:00am -4:00pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/  
Supervisory Patent Examiner, Art Unit 1793

/YUN QIAN/  
Examiner, Art Unit 1793